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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,108	02/26/2002	Antonio Serra	07040.0121	2684

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Washington, DC 20005-3315

EXAMINER

SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/082,108	Applicant(s) SERRA ET AL.	
	Examiner Robert Sellers	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 87-108 and 133-164 is/are pending in the application.
- 4a) Of the above claim(s) 93,97-108,138-140 and 147-160 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 87-92,94-96,133-137,141-146 and 161-164 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. This is responsive to the Request for Continued Examination along with the amendment filed January 31, 2005.

Claims 98-108 and 147-160 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction requirement in the reply filed on February 17, 2004. Claims 93, 97 and 138-140 are withdrawn as being directed to non-elected species.

2. The 35 U.S.C. 112, first and second paragraphs, rejections are rescinded in response to the identification of the molecular weight denoted in claims 142 and 143 as based on number average or weight average as corroborated by the technical bulletin for Nipol 1072 utilized in Table 1 on page 23 of the specification. The technical bulletin establishes a number average molecular weight, M_n , of 75,000 and a weight average molecular weight, M_w , of 290,000, both of which are within the parameters of claims 142 and 143.

3. The amendment to page 23, lines 9-12 of the specification (page 2 of the amendment filed January 31, 2005) sets forth a number average molecular weight of "approximately" 75,000 and a weight average molecular weight of "approximately 280,000." However, the technical bulletin for Nipol 1072 only enables a number average molecular weight of 75,000, not approximately 75,000. Furthermore, the weight average molecular weight is described as either 270,000 or 290,000 which does not enable the added weight average molecular weight of "approximately 280,000."

4. The Alex et al. article is no longer relied upon due to its utilization of ENR-50 which is a solid epoxidized natural rubber as confirmed by the Varghese et al. article (CAPLUS accession no. 2004:103488). Japanese Patent No. 10-36563 is withdrawn since the claimed epoxidized liquid organic compound requires internal epoxide groups. The Japanese patent (page 3, the last paragraph to page 4, line 4) sets forth only glycidyl ethers with terminal epoxy groups.

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 87-91, 94-96, 133-136, 141-146, 161 and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over Italian Patent No. 1,245,551; French Patent No. 2,187,808 and Great Britain Patent No. 2,197,654.

5. The rejections have been combined due to the lack of an explicit recitation of the epoxidized elastomer of the Italian patent being in the claimed liquid form. The use of epoxidized natural rubber such as Epoxyprene is a preferred embodiment (page 5, lines 11-12) and does not limit the teachings of the Italian patent solely to such an elastomer. The Italian patent is open to the crosslinking of epoxidized elastomers in general. It would have been obvious to formulate the composition of the Italian patent with an epoxidized elastomer as a liquid in order to optimize the uniformity of crosslinks throughout the carboxylated compound such as a butadiene-acrylic acid copolymer (page 18, Example 5).

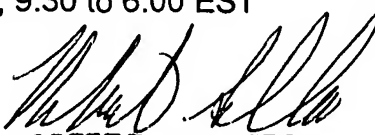
The arguments filed January 31, 2005 have been considered but are unpersuasive.

6. The French patent discloses an epoxidized polyolefin (page 2, line 13) which contains internal epoxide groups by virtue of the epoxidation of internal unsaturation. The specification on page 10, lines 28-29 deems epoxidized diene oligomers as suitable which are embraced by the prior art epoxidized polyolefin. Although the form of the epoxidized polyolefin is not mentioned, it would have been obvious to employ the epoxidized polyolefin as a liquid in order to optimize the uniformity of crosslinks throughout the carboxyl-terminated polybutadiene. The claimed crosslinked elastomeric material encompasses the reaction of the epoxidized polyolefin and carboxyl-terminated polybutadiene of the French patent which is cured according to page 9, the last paragraph as well as page 21, Example 7, describing the determination of tensile strength after curing. The presence of elongation reactions along with curing does not negate the curing reaction.

7. The claimed crosslinked elastomeric material is indistinguishable from the dynamically crosslinked carboxylated butadiene-acrylonitrile elastomer with the epoxidized soybean oil of the British patent regardless of the subsequent melting. The claims only necessitate a crosslinking reaction which is achieved by the process of the British patent. There are no limitations which distinguish the claimed crosslinked elastomer over the dynamically crosslinked elastomer of the British patent.

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rs
3/30/2005



ROBERT E.L. SELLERS
PRIMARY EXAMINER